UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/061,438	01/31/2002	Ralph P. McCroskey	070788 0282091	8113

7590 04/19/2005

SUZANNE BIGGS
Pillsbury Winthrop LLP
11682 El Camino Real
Suite 200
San Diego, CA 93102

EXAMINER	
VENCI, DAVID J	

ART UNIT	PAPER NUMBER
1641	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/061,438	MCCROSKEY ET AL.	
	Examiner	Art Unit	
	David J. Venci	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *January 14, 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) *22-34* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-34* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11-12-04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Examiner acknowledges Applicant's response filed on January 14, 2005, which amended claims 1-2, 6-8, 11-12 and 22, and cancelled claims 35-40.

Currently, claims 1-21 are under examination.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

Examiner acknowledges Applicant's election of Group I, claims 1-21, with traverse in the reply filed on January 14, 2005. The traversal is on the grounds that examination of both Group I and Group II does not constitute a burden upon Examiner. Specifically, Applicants appear to argue that Group I and Group II both require "optical readings" and, thus, are sufficiently related (see Applicants' Remarks at p. 10, third full paragraph). Applicants' argument has been carefully considered but is not persuasive because, as Applicants point out, Group I requires optical readings of protein (e.g. hemoglobin), while Group II requires optical readings of a labeling agent (see Applicants' Remarks at p. 10, third full paragraph, "[Group I] specifies that the optical readings are made at a wavelength at which hemoglobin absorbs light. [Group II] specifies that the optical readings are made at a wavelength at which the... labeling agent absorbs light"). Expansion of the scope of examination to include claims belonging to Group II requires search of additional classes/subclasses, for example 435/7.71, 435/7.72, 435/174-182, 436/518-535, 436/543-546, 436/800, etc. The restriction requirement is deemed proper and is made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Specifically, claim 1 has been amended to recite "forms" processes or proteins. Such "forms" do not appear in the specification as originally filed, and thus constitutes new matter.

Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the preamble of claims 1, 6, and 12, the recitation of "protein which is glycated" is indefinite because it is not clear whether/how the step of glycation is incorporated into Applicants' invention. In addition, the recitation of "a protein which is glycated relative to the total amount of the protein" is indefinite because it is not clear how a protein is glycated "relative" to an amount. It is not clear whether/how glycation is related to an amount. In addition, the recitation of "(" and ")" is indefinite because it is not clear whether/how verbiage intervening "(" and ")" departs or digresses from the claim. It is not clear whether verbiage intervening "(" and ")" contains required claim limitations.

In step (a) of claims 1, 6, 12, and 16-17 the recitation of "a negatively charged group" is indefinite. The identity of such a "negatively charged group" or to which entity(s) said group is attached is not clear. In addition, it is not clear under what conditions said group is negatively charged, as well as its purpose in the overall method. Examiner posits that said "negatively charged group" does not exist in a vacuum.

In step (b) of claim 1, the recitation of "forms" is indefinite because it is not clear what physical parameter(s) and/or process(es) constitutes "form." In addition, the recitation of "non-glycated... protein" lacks antecedent basis. In addition, the recitation of "protein which does not bind to the solid support" is indefinite because it is not clear which protein "the protein" is referencing. It is not clear whether "protein which does not bind to the solid support" references "a protein which is glycated" or "total amount of the protein" as recited in the preamble.

In step (b) of claim 1, the recitation of "said first buffer is applied in an amount sufficient to rinse off protein which does not bind to the solid support matrix" is indefinite because it is not clear whether this step requires the removal of glycated protein from the solid support matrix. The purpose of this step is not clear, as it appears to confound the quantitation of glycated protein.

In step (b) of claim 1, it is not clear under what mechanism the glycated protein and non-glycated protein bind to the solid support matrix. Because Applicants have not recited a mechanism by which glycated protein and non-glycated protein bind to the solid support matrix, it is not clear how pH is related to the ability of glycated protein and non-glycated protein to bind to the solid support matrix. The recitation of "said first buffer has a pH selected to allow both glycated and non-glycated forms of the protein to bind to said solid support matrix" is indefinite because Applicants have not recited sufficient causal relationship between the composition of the solid support matrix, the composition of each binding protein, and buffer pH.

In step (c) of claim 1 and 6, the recitation of "bound protein" or "protein bound" lacks antecedent support in step (b). In addition, the recitation of "the protein" is indefinite because it is not clear which protein "the protein" is referencing. It is not clear whether "the protein" references "a protein which is glycated" or "total amount of the protein" as recited in the preamble. In addition, the recitation of "quantitating amount of the protein" appears grammatically awkward.

In step (d) of claims 1 and 6, the recitation of "non-glycated protein" lacks antecedent basis.

In step (d) of claim 1, the recitation of "said second buffer has a pH selected to allow the glycated protein to bind to said solid support matrix but where the non-glycated protein does not substantially bind to said solid support matrix" is indefinite because Applicants have not recited sufficient causal relationship between the composition of the solid support matrix, the composition of each binding protein, and buffer pH. It is not clear under what mechanism the glycated protein and non-glycated protein bind to the solid support matrix. Because Applicants have not recited a mechanism by which glycated protein and non-glycated protein bind to the solid support matrix, it is not clear how pH is related to the ability of glycated protein and non-glycated protein to bind to the solid support matrix.

In step (e) of claims 1 and 6, the recitation of "protein" and "second bound protein reading" is indefinite because the identity of "protein" is not known. In step (e) of claim 1, it is not clear whether Applicants are referring to the aforementioned glycated protein, non-glycated protein, or both proteins. In step (e) of claim 6, the recitation of "bound protein" lacks antecedent basis.

In step (e) of claim 1 and 6, the recitation of "bound protein" or "protein bound" lacks antecedent support in steps (b) and (d). In addition, the recitation of "the protein" is indefinite because it is not clear which protein "the protein" is referencing. It is not clear whether "the protein" references "a protein which is glycated" or "total amount of the protein" as recited in the preamble. In addition, the recitation of "quantitating amount of the protein" appears grammatically awkward.

Claims 1, 6 and 12 are further rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are the steps of "quantitation of an amount of a protein which is glycated", as recited in the preamble. It is not clear how "quantitation of an amount of a protein which is glycated" is achieved when protein is rinsed off the solid support matrix in step (b). Clarification is necessary.

In step (f), of claims 1 and 6, the recitation of "calculating relative amount" appears grammatically awkward. In addition, the recitation of "relative amount of glycated protein" lacks antecedent basis and is indefinite because it is not clear what relationship is established with "amount of glycated protein."

Claim Rejections - 35 USC § 102

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Dean et al. (US 4,269,605).

Dean et al. teach a method of quantitation of an amount of a protein which is glycated comprising the steps of: contacting a solid support matrix (see col. 3, lines 29-36) which comprises a negatively charged group (see col. 3, lines 57-60, col. 4, line 11, "polymeric matrix activation", "COOH groups") and a hydroxyboryl compound (see col. 3, lines 37-41) and which has a measurement area (see col. 4, lines 64-67, "dipstick"), with an aliquot of biological sample (see Example 1, "human lysed blood"), contacting said solid support matrix with an aliquot of a first buffer having a pH selected to allow both glycated and non-glycated protein to bind to said solid support matrix (see col. 5, lines 11-17, "Non-glycoprotein material may be eluted" (noting that, since the phrase "Non-glycoprotein material may be eluted" indicates that both glycoprotein and non-glycoprotein are bound to column, first buffer necessarily has a pH that allows both glycated and non-glycated protein to be bound to said solid support matrix, and would be so recognized by persons of ordinary skill in the art)), quantitating amount of the protein bound to said

measurement area (see col. 5, lines 35-38, "calculation of % of total protein applied" (noting that "calculation of % of total protein applied" necessarily requires quantitating both glycated and non-glycated protein, and would be so recognized by persons of ordinary skill in the art)), contacting said solid support matrix with an aliquot of a second buffer wherein said second buffer has a pH selected to allow glycated protein to be bound to said solid support matrix where non-glycated protein is not substantially bound to said solid support matrix (see col. 5, lines 11-17, "suitable washing solution", "does not cause the desorption of the specifically bound glycoproteins"), quantitating protein bound to said measurement area (see col. 5, lines 35-38, "Determination of the recovered glycoprotein"), and calculating relative amount of glycated protein using said first and second bound protein readings (see col. 5, lines 35-38, "calculation of % of total protein applied" (noting that "calculation of % of total protein applied" necessarily requires a first bound protein reading quantitating both glycated and non-glycated protein, and a second bound protein reading quantitating glycated protein alone, and would be so recognized by persons of ordinary skill in the art)).

With respect to claims 2-3, Dean et al. teach a method of quantitation of glycated protein wherein the property measured is an absorbance reading (see col. 5, lines 35-38, "absorbance measurements") at a specified wavelength (see col. 6, lines 14-16, "413 nm").

With respect to claim 4, Dean et al. teach a method of quantitation of glycated protein wherein the glycated protein is glycated hemoglobin (see Abstract).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6-10 and 12-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (US 4,269,605) in view of Sanders (US 4,407,961) and May & Richards (GB 2206411 A).

Dean et al. teach a method of quantitation of glycated protein as described supra. Dean et al. also teach that the optimum pH for binding glycated protein to a hydroxyboryl compound is between pH 8.0-9.0 (see col. 10, lines 26-29).

Dean et al. do not teach the claimed first buffer pH 5.0-7.9 range for binding glycated and non-glycated protein to a negatively charged anion-exchange matrix.

However, Sanders teaches a buffer having a pH of 6.4-7.2 (see col. 2, line 35) for binding protein to a solid support matrix having a negative charge (see col. 3, lines 31-45, e.g. "carboxy cellulose"). May & Richards teach a method of quantitation of glycated protein using both a negatively charged group and a hydroxyboryl compound (see Abstract).

Therefore, it would have been obvious for a person of ordinary skill in the art to have used the method of quantitation of glycated protein, as taught by Dean et al., with the buffer having a pH of 6.4-7.2, as taught by Sanders, along with the method of quantitation of glycated protein using both a negatively charged group and a hydroxyboryl compound, as taught by May & Richards, because May & Richards teach that a single device with two different binding groups can be used to isolate and quantitate both glycated and non-glycated proteins. Dean et al. teach that hydroxyboryl binding groups have an optimum pH between 8.0-9.0 for binding glycated protein, while Sanders teaches that negatively charged binding groups have an optimum pH between 6.4-7.2 for binding non-glycated proteins.

With respect to claims 7-9, Dean et al. teach a method of quantitation of glycated protein wherein the property measured is an absorbance reading (see col. 5, lines 35-38, "absorbance measurements") at a specified wavelength (see col. 6, lines 14-16, "413 nm").

With respect to claim 10, Dean et al. teach a method of quantitation of glycated protein wherein the glycated protein is glycated hemoglobin (see Abstract).

With respect to claim 12, May & Richards teach solid support having a sample application site (see Fig. 1, element 12, "first binding zone").

With respect to claims 13-15, Dean et al. teach a method of quantitation of glycated protein wherein said dihydroxyboryl compound has an R group consisting of m-aminophenyl (see col. 9, "reactive agent").

With respect to claims 16-19, Sanders teaches a negatively charged solid support matrix (see col. 3, line 44, "carboxy cellulose").

With respect to claim 20, Sanders teaches a method of quantitation of glycated protein using MOPS buffer (see col. 3, line 9).

With respect to claim 21, Sanders teaches a method of quantitation of glycated protein using taurine (see col. 3, line 18-19, "N-2-acetamido-2-aminoethanesulfonic acid").

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (US 4,269,605) in view Goldstein et al., 20 Diabetes Care S18 (1997).

Dean et al. teach a method of quantitation of glycated protein as substantially described supra. Dean et al. do not teach the detection of glycated albumin.

However, Goldstein et al. teaches that detection of glycated albumin is a useful test for glycemia in diabetes (see p. S20, col. 2). Therefore, it would have been obvious for a person of ordinary skill in the art to have performed the methods of quantitation of glycated protein, as taught by Dean et al., Sanders, and May & Richards, with glycated albumin, as taught by Goldstein et al., because Goldstein et al. teaches that measurements of glycated albumin correlate well with measurements of glycated hemoglobin, and that measurement of glycated albumin may be advantageous over measurement of glycated hemoglobin in situations where measurement of glycated hemoglobin in not useful.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (US 4,269,605) in view of Sanders (US 4,407,961), May & Richards (GB 2206411 A), and Goldstein et al., 20 Diabetes Care S18 (1997).

Dean et al., Sanders, and May & Richards teach methods of quantitation of glycated protein as substantially described supra. Dean et al., Sanders, and May & Richards do not teach the detection of glycated albumin.

However, Goldstein et al. teaches that detection of glycated albumin is a useful test for glycemia in diabetes (see p. S20, col. 2). Therefore, it would have been obvious for a person of ordinary skill in the art to have performed the methods of quantitation of glycated protein, as taught by Dean et al., Sanders, and May & Richards, with glycated albumin, as taught by Goldstein et al., because Goldstein et al. teaches that measurements of glycated albumin correlate well with measurements of glycated hemoglobin, and that measurement of glycated albumin may be advantageous over measurement of glycated hemoglobin in situations where measurement of glycated hemoglobin in not useful.

Response to Arguments

In prior Office Action, claims 1 and 6 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the recitation of "sufficient." Applicants' amendment to claims 1 and 6 is sufficient to overcome this rejection. Accordingly, this rejection is withdrawn.

In prior Office Action, claim 7 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for the recitation of "same property". Applicants' amendment to claim 6 is sufficient to overcome this rejection. Accordingly, this rejection is withdrawn.

In prior Office Action, claims 1-4 were rejected under 35 U.S.C. 102(b) as being anticipated by Dean et al. (US 4,269,605). Applicants argue that Dean et al. do not teach every limitation of claim 1, as amended. Specifically, Applicants argue that, although Dean et al. teach one buffer for binding glycosylated hemoglobin to a column and another buffer for desorbing glycosylated hemoglobin from the column, Dean et al. do not teach step (b) wherein "a first buffer having a pH where both non-glycated protein and glycated protein are bound to a solid support matrix" (see Applicants' Remarks at paragraph bridging pp. 12-13, lines 1-3). Applicants' argument has been carefully considered but is not persuasive for the following reasons:

Applicants' invention, as claimed, does not require "a first buffer having a pH where both non-glycated protein and glycated protein are bound to a solid support matrix" (emphasis added), as Applicants argue. Claim 1 merely recites "a first buffer wherein said first buffer has a pH selected to allow both glycated and non-glycated forms of the protein to bind" (emphasis added). Examiner posits that such broad, permissive language does not amount to a step wherein both non-glycated protein and glycated protein are bound to a solid support matrix. However, even if claim 1 is narrowly construed to require that both

non-glycated protein and glycated protein are bound to a solid support matrix, Dean et al. nevertheless inherently teach this step. Dean et al. teach a process wherein non-glycated protein is "eluted" from a column (see col. 5, lines 11-12). Examiner posits that said process of "eluting" said protein from said column necessarily requires that said protein was initially bound to said column, and would be so recognized by persons of ordinary skill in the art.

Applicants further argue that Dean et al. do not teach step (c), i.e. "making a first bound protein reading" (see Applicants' Remarks at p. 13, lines 3-6). Notwithstanding Examiner's position that claim 1 does not recite a binding step, Applicants' Reply appears to concede that Dean et al. teach the measurement of bound protein (see Applicants' Remarks at p. 13, lines 4-5, "Dean et al. appear to describe measurement of bound glycated hemoglobin..."). In support of Applicants' contention that Dean et al. teach the measurement of bound protein, Examiner observes that Dean et al. describe a process wherein the "total protein applied" to the column is used to determine the percentage of recovered glycoprotein (see col. 5, lines 35-38). Again, Examiner posits that said process of determining the percentage of recovered glycoprotein necessarily requires that said total protein was initially measured, and would be so recognized by persons of ordinary skill in the art.

In prior Office Action, claims 6-10 and 12-21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (US 4,269,605) in view of Sanders (US 4,407,961) and May & Richards (GB 2206411 A). Applicants argue that the secondary references, i.e. Sanders and May & Richards, do not fairly teach or suggest the claim limitations not found in the primary reference, i.e. Dean et al. Specifically, Applicants submit that "Sanders do not suggest use of a first buffer which allows both glycated and non-glycated protein to their solid support matrix" (see Applicants' Remarks at p. 15, lines 14-16). In response, Examiner submits that Applicants' invention, as claimed, does not require "use of a first buffer which allows both glycated and non-glycated protein to their solid support matrix." Claim 6 merely recites "a first

buffer wherein said first buffer has a pH of about 5.0 to about 7.0." Examiner posits that such language does not amount to a step wherein "both glycated and non-glycated protein to their solid support matrix."

In addition, Applicants provide a succinct synopsis of the teachings of May & Richards (see Applicants' Remarks at p. 15, lines 17-27) and further argue that "one of skill in the art would not be likely to combine teachings of Dean et al. with those of Sanders and/or May and Richards" due to "substantial differences in the assay methods and formats which Sanders and May and Richards appear to describe" (see Applicants' Remarks at p. 15, lines 28-31). In response, Examiner posits that there does not appear to be "substantial differences in the assay methods and formats which Sanders and May and Richards appear to describe" such that one of ordinary skill in the art would, in fact, be likely to combine teachings of Dean et al. with those of Sanders and/or May and Richards.

In prior Office Action, claim 5 was rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (US 4,269,605) in view Goldstein et al., 20 DIABETES CARE S18 (1997). Applicants argue that claim 5 is not rendered obvious because Dean et al. do not teach every limitation of claim 1. Specifically, Applicants argue that Dean et al. do not teach step (b) and (c) of claim 1. Applicants' argument has been carefully considered but is not persuasive for the reasons set for supra.

In prior Office Action, claim 11 was rejected under 35 U.S.C. 103(a) as being unpatentable over Dean et al. (US 4,269,605) in view of Sanders (US 4,407,961), May & Richards (GB 2206411 A), and Goldstein et al., 20 DIABETES CARE S18 (1997). Applicants argue that claim 11 is not rendered obvious because Dean et al. do not teach every limitation of claim 6. Applicants' argument has been carefully considered but is not persuasive for the reasons set for supra.

In prior Office Action, claims 1-21 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of copending Application No. 10/062,281 in view of Dean et al. (US 4,269,605) and Sanders (US 4,407,961). Applicants direct Examiner's attention to the fact that Application No. 10/062,281 was abandoned on September 24, 2002. Accordingly, this rejection is withdrawn.

Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Venci whose telephone number is 571-272-2879. The examiner can normally be reached on 08:00 - 16:30 (EST). If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David J Venci
Examiner
Art Unit 1641

djv

LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600
04/15/05